



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 2  
290 BROADWAY  
NEW YORK, NY 10007-1868

JUN 25 2014

Commissioner Joseph Martens  
NYS Department of Environmental Conservation  
625 Broadway  
Albany, NY 12233-1011

Dear Commissioner Martens:

This is in response to the May 28, 2014 letter from the New York State Environmental Facilities Corporation (EFC) to the United States Environmental Protection Agency (EPA) regarding projects under consideration that may be undertaken, using Clean Water State Revolving Fund (CWSRF) funds, in connection with the replacement of the Tappan Zee Bridge with the New New York Bridge. You also sent a memorandum to Administrator McCarthy on June 23, 2014 regarding CWSRF funding, and this responds to that as well. Given the significance of the funds at issue, and the need to ensure that the purposes of the established CWSRF are appropriately met by any projects deemed eligible for such financial assistance, we appreciate the opportunity to provide our views. In particular, as discussed below, we want to ensure that the process surrounding this decision is transparent and, given the size, scope, and seemingly unconventional approach to the use of CWSRF, that the parties involved have exercised due diligence, and carefully scrutinized the project details and considered the implications vis-à-vis the legislative purpose of the Clean Water Act.

Additionally, and contrary to some media reports of which I am aware, I wish to clarify at the outset that the EPA has not approved the request of the EFC, as set forth in the May 28<sup>th</sup> letter. Rather, the EPA is carefully reviewing the request.

As set forth in the May 28<sup>th</sup> letter, and further referenced in your June 23<sup>rd</sup> memorandum, the EFC has proposed spending \$511 million in CWSRF funding for 12 projects relating to mitigating the environmental impacts of building the new Tappan Zee Bridge over the Hudson River. The EFC has stated that this request will fund "estuary projects" pursuant to Section 603(c) of the federal Clean Water Act (CWA), which it believes are in furtherance of the existing Comprehensive Conservation and Management Plan (CCMP). While your descriptions of these specific proposed projects are helpful, and identify a possible nexus between them and the CCMP, it bears mention that we do not believe New York State has previously used the CWSRF for many of the types of estuary projects now under consideration for funding.

As you are likely aware, federal CWSRF dollars have historically been provided by the EPA to the State of New York through the EFC so that the EFC can offer low interest loans to local governments, primarily to build or upgrade wastewater treatment systems. As the municipalities pay off these low interest loans, the money is recycled into the state's revolving fund, thereby replenishing it to meet future wastewater treatment needs and other authorized CWSRF purposes. Since 1990, EPA has provided \$4.1 billion to EFC for CWSRF purposes, and the monies have always been used to support wastewater treatment systems.

It is important, therefore, that when EFC considers the merits of each project in connection with determining its eligibility for CWSRF funding, it also recognizes the present and reasonably anticipated future funding needs associated with the repair, replacement, and upgrade of New York's municipal wastewater infrastructure. While the Clean Water Act's enumeration, in Section 603(c)(3), of the types of projects that may receive financial assistance from the CWSRF necessarily provide some flexibility in assessing the purpose of said projects, EFC should carefully scrutinize the proposed projects to ensure that they appropriately further the environmental goals that underlie the State's own intended use plan and CCMP.

As mentioned earlier, our review of the proposed projects described in your May 28<sup>th</sup> letter and the June 23<sup>rd</sup> memorandum gave rise to several questions pertaining to eligibility for CWSRF funding. These questions – with additional context – are set forth below for your consideration. While not determinative of the likely eligibility for funding, we would nevertheless value obtaining any additional information you can provide relating to these issues. We also strongly suggest that you, as best you can, address these issues during your own deliberations regarding funding priorities and eligibility.

1. ***How will these projects, which are already required to be undertaken pursuant to a permit issued to the NYS Thruway Authority by the NYSDEC, improve water quality? In addition, it would be helpful to better understand how these projects were prioritized compared to other estuary projects that may be eligible for CWSRF funding.***

Nearly all of the 12 proposed projects are required by the Mitigation Plan that is included in the permit that the NYSDEC issued to the NYS Thruway Authority on March 25, 2013 (<http://www.newnybridge.com/documents/dec-permit/final-permit.pdf>). Please explain the analysis that led New York State to conclude that the funding of these 12 projects is the best and highest use of the \$511 million to advance the improvement of water quality and the betterment of the NY/NJ Harbor and Estuary Program.

2. ***It appears that many of these projects were not of the kind initially contemplated by the Comprehensive Conservation Management Plan (CCMP) that was adopted in 1996. It would be helpful to better understand how EFC views these projects in the context of the CCMP, as they appear to have, as a primary aim, the mitigation of problems created by an ongoing construction project.***
3. ***Given the size of the proposed projects, particularly taken together, it is important to provide greater transparency regarding their estimated costs. It appears that the cost estimates for the individual projects varied significantly within one week, and it would be helpful to understand the basis for such variances.***

EFC provided EPA with two sets of cost estimates – one on June 11, 2014 and the other on June 18, 2014. Some of the cost estimates changed significantly. Some examples in the varying cost estimates include the following:

- the first provided cost estimate of the Gay's Point Restoration project was \$3.6 million; the second provided cost estimate is \$5.7 million;
- the first provided cost estimate of the Piermont Marsh project was \$1 million; the second provided cost estimate is \$2 million; and
- the first provided cost estimate of the stormwater management measures was \$9.4 million; the second provided cost estimate is \$14.4 million.

Because these projects were identified in the March 2013 NYSDEC permit as part of the Mitigation Plan, please explain why the costs are not more definite. Further, please provide financial documentation in support of the \$100,000 cost estimate for the proposed Falcon Nest Box Relocation.

4. *Please provide additional information with regard to the eligibility for CWSRF funding of the Dredging and Mound Removal (\$40.4 million) and the Dredge Material Disposal (\$69.8 million) projects.*

As you know, the draft Management of Dredged Materials section is not part of the final CCMP. Please explain how the \$40.4 million proposed for the Dredging and Mound Removal project and the \$69.8 million proposed for the Dredge Material Disposal project would be eligible for CWSRF funding.

5. *Please provide additional information with regard to the eligibility for CWSRF funding for the River Bottom Armoring (\$29.9 million) project.*

Please explain how the River Bottom Armoring mitigation project is eligible for CWSRF funding, since, based on your description in the May 28 letter, this activity would appear to result in the destruction of benthic habitat.

6. *Please provide additional information with regard to the eligibility for CWSRF funding of the Shared Use Path (\$57.1 million) project.*

Please provide an explanation of the costs of the Shared Use Path project and how it relates to water quality improvement.

7. *Given the previous practice of classifying eligibility for CWSRF on the applicant's population, it would be helpful to clarify how the EFC places the NYS Thruway Authority in the same funding category as New York City, when these mitigation projects will be undertaken in communities with much smaller populations.*

EPA understands that the EFC proposes to spend the \$511 million from the designated pool of monies that had been available for projects in New York City – a municipality that has multibillion dollar needs in the area of wastewater treatment systems. According to New York City's 10-Year Capital Strategy, the New York City Municipal Water Finance Authority is relying on the issuance of a minimum of \$900 million in bonds through funds obtained from EFC through 2017 to help finance its water infrastructure needs. At a minimum, we believe it advisable to consider the likely impacts that funding this project will have on the City's ability to fund its 10-Year Capital Strategy.

8. *Given the size and scope of these projects, it would be helpful to better understand how the EFC has designated this amendment to the Intended Use Plan as a "minor modification" which is not subject to public comment.*

The EFC's first public notification of this request to spend \$511 million on Tappan Zee mitigation was in the June 11, 2014, NYSDEC Environmental Notice Bulletin, which states that "Section 3.6 for the FFY 2014 Intended Use Plan allows minor modifications to the Intended Use Plan through the publication of the notice in the Environmental Notice Bulletin." As stated above, in 2014, EPA is slated to provide \$155 million to the EFC for the entire state. We understand that EFC has referred to the revision of the IUP as a "minor modification," which is not subject to public comment. We further understand that EFC claims that this is a minor modification because it will not change the overall funding for federal fiscal year 2014. EFC has explained that this is because the City of New York has elected to not proceed with projects it had previously said it would pursue in federal fiscal year 2014.

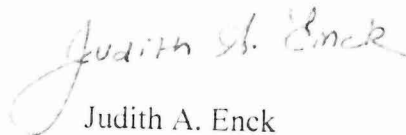
Please explain why this amendment – for newly announced SRF projects – is not subject to public comment, and why the EFC would not consider noticing this modification for public comment.

We further note that the EFC's 2014 Final CWSRF Intended Use Plan (<http://www.nysefc.org/default.aspx?tabid=112>) indicates reserve funds for new 2014 projects of \$1.155 billion, as of October 1, 2013. Please explain what steps you are taking to make these funds available to local governments.

Again, we appreciate your outreach to us concerning the relationship between these proposed projects and the scope of the governing CWSRF regulations and eligibility for funding assistance under that program. We have raised questions and concerns so that the EFC, EPA, and all the relevant stakeholders, can best be assured that any funds spent are appropriate and in furtherance of the specific statutory goals. New York's administration of a strong and reliable CWSRF depends upon its careful stewardship of that fund and scrutiny of proposed expenditures. We remain available to meet with you concerning the issues we have raised, and hope that you fully consider them as you continue to deliberate over these important environmental issues.

Thank you.

Sincerely,

A handwritten signature in cursive script, reading "Judith A. Enck".

Judith A. Enck  
Regional Administrator

cc: Matthew J. Driscoll  
Howard A. Zucker  
Cesar A. Perales  
Francis T. Corcoran  
Charles Kruzansky  
Vita DeMarchi

ANDREW M. CUOMO  
GOVERNOR



JOE MARTENS  
COMMISSIONER

STATE OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
ALBANY, NEW YORK 12233-1010

**M E M O R A N D U M**

TO: Administrator McCarthy  
FROM: Commissioner Martens  
SUBJECT: SRF Financing  
DATE: June 23, 2014

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I appreciate the call last week regarding New York's proposed use of its State Revolving Fund (SRF) for various projects associated with the Tappan Zee Bridge project. As the Chairman of Board of the entity that will consider the financings this week, I wanted to respond to your concerns quickly.

The Clean Water Act authorizes states to use our CWSRFs to provide financial assistance for the development and implementation of a comprehensive conservation and management plan (CCMP). The relevant CCMP was written broadly by scores of interested parties and accepted by EPA. Its main objectives are managing habitat and living resources, toxic contamination, dredged material, pathogenic contamination, floatable debris, nutrients and organic enrichment, rainfall induced discharges and public involvement and education. Any project that develops or implements these objectives is eligible for financial assistance from the CWSRF.

The only relevant inquiry is whether each of the projects under consideration can be fairly characterized as implementing one or more objectives of the CCMP. While many of the proposed projects provide benefits to water quality, that is not the test for eligibility. Similarly, if a project is in mitigation of another activity or is mandated by a permit, the question remains whether it implements the CCMP. Congress clearly did not require water quality as a mandatory eligibility criterion or choose to impose such a limitation on projects covered by 33 USC 1383(c)(3).

Dedicated revolving funds have become an increasingly popular tool for sustainable infrastructure finance. The SRF, one of the earliest revolving funds, has been operating and gaining financial momentum since the 1980's. With constrained resources and urgent infrastructure needs, innovation in infrastructure finance is critical today. Reaching for more creative and efficient methods to use existing financial resources and existing programmatic authority to achieve environmental and infrastructure objectives is a necessity and one that EPA supports. Of the \$100 billion in financial assistance provided by the Nation's CWSRFs since inception, only \$6 million was originated in direct support of one of the 28 Estuaries of National Significance. That should change.

The Environmental Facilities Corporation General Counsel Jim Levine provided a detailed analysis to George Ames dated May 28<sup>th</sup> explaining how each of the proposed projects implements the CCMP. Jim's analysis is compelling and, I believe, supports the conclusion that these projects are eligible for SRF financing. I am grateful for the past support we have received from EPA staff to explore novel questions relating to the SRF that have allowed the program to work to achieve its intended scope. The EFC Board meets this week so I would appreciate your feedback and thoughts as soon as possible.

c: Bob Perciasepe

**Enck, Judith**

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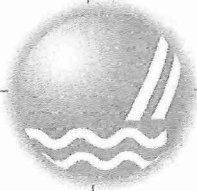
**From:** Driscoll, Matthew (EFC) <Matthew.Driscoll@efc.ny.gov>  
**Sent:** Monday, June 09, 2014 6:14 PM  
**To:** Enck, Judith  
**Subject:** 320 estuary projects.  
**Attachments:** NNYBDCINTERPRETATION.pdf

Judith,

Attached is our legal analysis in connection with the estuary projects we discussed. We submitted it to, and discussed it with, EPA's SRF staff in Washington DC because we believed it might present a question of national interpretation of Title VI of the Clean Water Act. EPA's SRF staff concurred in our analysis.

MD.





New York State  
ENVIRONMENTAL FACILITIES CORPORATION

MATTHEW J. DRISCOLL, *President and CEO*

Mr. George Ames  
Chief, State Revolving Funds Branch  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
EPA East (4204M)  
Washington, D.C. 20460

May 28, 2014

Dear Mr. Ames,

I'd like to thank you and your colleagues for meeting with us last week to discuss our proposed estuary projects. We believe each project under consideration will assist in the development and implementation of the New York/New Jersey Harbor Estuary Program Comprehensive Conservation and Management Plan and, accordingly is an eligible Clean Water Act Section 320 project qualified for financial assistance from the Clean Water State Revolving Fund (CWSRF) under Section 1383(c)(3) of the Clean Water Act and the implementing federal guidelines governing the CWSRF.

The New York-New Jersey Harbor & Estuary Program (HEP) was accepted into the National Estuary Program in 1988 in order to protect the natural resources and diversity of the New York-New Jersey Harbor Estuary—one of the 28 Estuaries of National Significance in the United States. The HEP focuses on protecting and restoring healthy waterways and productive habitats, managing sediments, fostering community stewardship, educating the public, and improving safe access to waterways. The HEP's focus encompasses the tidal waters of the Hudson-Raritan Estuary from Piermont Marsh in New York State to an imaginary line connecting Sandy Hook, New Jersey, and Rockaway Point, New York, at the mouth of the Harbor. The HEP also focuses efforts on the New York Bight, the ocean area extending approximately 100 miles beyond Harbor waters. In 2011, the HEP updated its geographic footprint to include the Hudson River watershed up to the Troy Dam, as well as the watersheds of the Raritan, Passaic, and Hackensack Rivers in New Jersey.

The HEP's primary planning documents are the March 1996 Comprehensive Conservation and Management Plan (CCMP) approved by USEPA in March 1997 and the revised 2011 Action Plan developed to assist in the implementation of the CCMP. The components of the HEP as set forth in the CCMP are: management of habitat and living resources; management of toxic contamination; management of dredged material; management of pathogenic contamination; management of floatable debris; management of nutrients and organic enrichment; rainfall-induced discharges; and public involvement and education. The 2011 Action Plan highlights important environmental issues facing the New York-New Jersey Harbor Estuary and features five major human use and ecosystem impairments that participants in the HEP are striving to address. The 2011 Action Plan identifies the following actions to address such impairments: clean up pollution in the estuary; improve habitat and ecological

health; improve public access; support an economically and ecologically viable estuary and port; and allow for public education and community involvement.

The Hudson-Raritan Estuary (HRE) Comprehensive Restoration Plan (CRP) which is part of the HEP, is a master plan that was developed in 2009 by the US Army Corps of Engineers (USACE) and the Port Authority of New York and New Jersey in partnership with the HEP. The CRP is intended to be used by stakeholders (e.g., environmental and community groups, government agencies, etc.) throughout the region to work on a series of common restoration goals which benefit the estuary, and to develop a comprehensive strategy for habitat protection and restoration.

Each of the estuary projects identified below are being undertaken in connection with the replacement of the Tappan Zee Bridge with the New New York Bridge (NNYB).

### **Gay's Point Restoration**

The purpose of this project is to restore productivity, species diversity, and resiliency to the New York-New Jersey Hudson River Estuary ecosystem by recreating lost physical structures and their associated ecological functions. Gay's Point has been identified by NYSDEC as a potentially suitable location for secondary channel creation. Currently, Gay's Point consists of an artificially created tidal embayment (i.e., contiguous backwater) that is separated from the main river channel by dredge fill. Contiguous backwaters such as those observed at Gay's Point typically have lower current velocities, greater sediment deposition resulting in finer substrates, higher water temperatures, and lower dissolved oxygen levels than secondary river channels with relatively unimpeded flows. The embayment at Gay's Point would benefit from the introduction of flushing flows from the main river channel, which would be conveyed through the embayment's northern end by removing fill, thereby creating a secondary channel similar to those lost to dredge and fill activities.

Based upon our review, we believe this project assists in the development and implementation of the Management of Habitat and Living Resources component of the CCMP. Specifically, secondary channel restoration will assist in the development and implementation of the following goals of the CCMP:

- To restore and maintain an ecosystem which supports an optimum diversity of living resources on a sustained basis.
- To preserve and restore ecologically important habitat and open space.

This project element would also assist in the development and implementation of the Target Ecosystem Characteristics (TECs) as defined by the CRP:

*The Enclosed and Confined Waters TEC focuses on poorly flushed, enclosed, constricted, and over-excavated subtidal areas of the HRE study area that exhibit periodic or continuous poor water quality. Examples of enclosed and confined water bodies occurring in the HRE study area include modified tidal creeks, enclosed basins, and man-made bathymetric depressions with poor circulation....*

## Oyster Bed Restoration

In collaboration with NYSDEC, an oyster restoration plan is currently proceeding in two phases. As part of the initial phase, shell material was taken from the 8-acre dredge area where the presence of oysters has been recorded and relocated to an identified area with documented shell material present further west in the bridge vicinity but outside the dredge prism.

The second phase of the restoration plan has yet to be developed. Details of this phase including the location of the restored habitat, identification of the sources for shell/non-shell material, and the location within the existing waterbody where broodstock will be cultured, are all being developed in collaboration with NYSDEC. A potential habitat increase of approximately 0.25-0.5 acres is anticipated.

Based upon our review, we believe this project assists in the implementation of the Management of Habitat and Living Resources component of the CCMP. Specifically this project element will assist in the development and implementation of the following goals of the CCMP:

- To restore and maintain an ecosystem which supports an optimum diversity of living resources on a sustained basis.
- To preserve and restore ecologically important habitat and open space.

This project element will also assist in the development and implementation of the Target Ecosystem Characteristics (TECs) as defined by the CRP, which states:

*The Oyster Reefs TEC aims to establish oyster reefs at several locations in the HRE study area. The short term objective for the oyster reefs TEC is to create 500 acres of self-sustaining and naturally expanding oyster reef habitat in the HRE study area across 10 to 20 sites by 2015.*

## Net Conservation Benefit Plan

NYSDEC is requiring the preparation of an Endangered and Threatened Species Mitigation Plan (the Plan) for the benefit of Hudson River sturgeon as part of its environmental permit for the NNYB. The purpose of the Plan is to outline a series of scientific studies that will result in a net conservation benefit to endangered shortnose and Atlantic sturgeon by providing new ecological information or promoting conservation measures for these species.

In order to ensure a net conservation benefit to shortnose and Atlantic sturgeon, a series of studies have been undertaken to attain a better understanding of sturgeon ecology within the Hudson River. These efforts, which aim to track the movement, foraging, and habitat use of the Hudson River sturgeon, include the following studies:

- Mapping of shallow-water benthic habitats throughout the unmapped portions of the Hudson River to determine which of these habitats are foraging areas for shortnose and Atlantic sturgeon.
- A foraging study to describe the diets of several life stages of shortnose and Atlantic sturgeon in the Hudson River.

*The restoration targets for enclosed and confined waters aim to improve the condition of these water bodies to where they match state-defined designated uses (i.e., shellfishing, bathing, fishing, etc.).*

### **Piermont Marsh**

Piermont Marsh, in Rockland County, is the largest area of intertidal brackish marsh in the Hudson River south of the Tappan Zee Bridge. Piermont Marsh is designated as a Significant Coastal Fish and Wildlife Habitat by New York State Department of State (NYSDOS) for its extensive tidal marsh bordered by shallows and mudflats, all of which are habitats that support important biological resources. Furthermore, the tidal wetland habitat restoration being contemplated would assist in the development and implementation of with the Hudson-Raritan Estuary Comprehensive Restoration objectives for the Coastal Wetlands Target Ecosystem Characteristic—that is, the short-term objective to create or restore 1,200 acres of wetlands by 2015 and the long-term objective to create or restore a total of 32,000 acres by 2050.

A review of historical aerial maps has indicated a severe decline in native wetland plants and their replacement with the invasive reed, *Phragmites australis*, between 1991 and 2007. NYSDEC has indicated that native plants appear to be even further reduced since 2007, with *Phragmites* currently accounting for approximately 90% of the Piermont Marsh vegetation. Without management actions, the remaining native plant communities and important marsh functions will be lost. Therefore, a *Phragmites* Control Program will be developed to eradicate *Phragmites*, thereby allowing native plants the opportunity to return to the marsh, and restore important habitat functions associated with the restored marsh.

A second project at Piermont Marsh will restore an historic oxbow in the central area of Crumkill Creek to re-establish flow regimes within the creek channel. This restoration will be accomplished through the one-time placement of a small amount of fill in the existing by-pass, which will divert flow back into the historic oxbow.

Based upon our review, we believe this project assists in the implementation of the Management of Habitat and Living Resources component of the CCMP. Specifically this project element will assist in the development and implementation of the following goals of the CCMP:

- To restore and maintain an ecosystem which supports an optimum diversity of living resources on a sustained basis.
- To preserve and restore ecologically important habitat and open space.
- To encourage watershed planning to protect habitat.
- To foster public awareness and appreciation of the natural environment.
- To minimize erosion; to decrease soil and water loadings of sediment and pollutants to the Harbor/Bight.

- To have ongoing coordinated and integrated efforts with various state and federal groups and dredged material management task forces.
- To evaluate and implement, where practicable, alternative methods of dredged material disposal including those with beneficial uses, such as habitat restoration, landfill cover, etc.
- To restore and maintain healthy and productive Harbor/Bight ecosystem, with no adverse ecological effects due to toxic contamination.
- Action Plan Goal 1B: Eliminate toxicity or bioaccumulation impacts on living resources by reducing contaminated sites, and manage risk to humans from seafood consumption.
- Action Plan Goal 4: Support an Economically and Ecologically Viable Estuary and Port- The Port of New York and New Jersey will be an integral and complementary part of the world-class New York-New Jersey Harbor Estuary that is environmentally sustainable, economically sufficient, and safe for commercial and recreational navigation.
- Action Plan Goal 4A: Sediment Quality- Reduce sediment hot spots and point and non-point sources of contaminants entering the Harbor, such that levels of toxics in newly deposited sediments do not inhibit a healthy thriving ecosystem and can be dredged and beneficially reused.
- Action Plan Goal 4B: Sediment Quality- Achieve a quantity of sediments entering the Harbor system that supports the ecological health of the Estuary, including protection of shallow water habitats, such as oyster reefs, without excessively impairing navigational activities.

#### **River Bottom Armoring**

Construction of the NNYB requires the dredging of a construction access channel with a depth of 11 to 12 feet at MLLW to allow access by construction barges and tugs. To develop this construction access channel, a total of approximately 0.95 million cubic yards (mcy)—0.84 mcy of which was dredged between August 2, 2013, and October 30, 2013—of bottom sediment will be dredged down to a depth of 14 feet below MLLW, allowing for the placement of two feet of armoring on the river bottom to prevent resuspension of sediment due to propeller (“prop”) wash from tugs operating in the channel during bridge construction.

The amount of sediment that would be resuspended due to prop wash in the absence of armoring would be very large, due to the highly erodible soft river sediment within the project area. Estimated sediment resuspension rates due to the movement of tugs within the construction channel (up to 8 tugs working simultaneous 8-hour shifts during more than 4 years of construction) if armoring would not be used ranges from 1,389,300 kg/sec at about 12 feet, to 8,279 kg/sec at a depth of about 33 feet for 1800 horsepower tugboats moving at one knot, although these rates would diminish over time, as the soft sediment became scoured and resuspended.

- A tagging and tracking study to determine the localized movement patterns and use of benthic habitats by several life stages of shortnose and Atlantic sturgeon in the Hudson River.
- An outreach effort directed at the commercial fishing industry to reduce the impacts of commercial by-catch of Atlantic sturgeon in coastal fisheries.

Based upon our review, we believe this project assists in the implementation of the Management of Habitat and Living Resources component of the CCMP. Specifically this project will assist in the development and implementation of the following goals and objectives of the CCMP:

- To restore and maintain an ecosystem which supports an optimum diversity of living resources on a sustained basis.
- To preserve and restore ecologically important habitat and open space.
- To foster public awareness and appreciation of the natural environment.
- Minimize human disturbance of natural habitats.

#### Dredging and Mound Removal

Construction of the New NY Bridge requires the dredging of a construction access channel with a depth of 11 to 12 feet at MLLW (mean low level water) to allow access by construction barges and tugs. Results of laboratory analysis of sediment samples collected within the dredge prism indicate contamination with priority organics (DDT, DDD, DDE, and Dieldrin), and heavy metals (lead, arsenic, cadmium, and copper). Cadmium, Copper, Lead, and Total DDT, DDD, and DDE sediment concentrations in some portions of the dredge prism exceeded the Class B or C (moderate or high contamination) thresholds. P R 12

The processes of dredging and mound removal will improve the water quality of the Hudson River by removing this source of contamination from the river thereby removing any potential for resuspension into the water column or into the food chain. In addition, the top 3 feet of one of the sediment mounds that have formed behind existing bridge piers will be removed upon demolition of the existing bridge and it is anticipated that sediment from these mounds will be placed in an upland disposal facility permitted to receive such material. Removal of the upper few feet of the mound, and the elevated concentrations of lead that greatly exceeded the Class C threshold, and other contaminants, will remove approximately 42,000 cubic feet of bottom sediment containing pollutants that contribute to the WI/WPL Waterbody Segment Impairments, and have been identified as problem pollutants by the NY-NJ HEP.

Based upon our review, we believe this project assists in the implementation of the Management of Toxic Contamination component of the CCMP as well as the Management of Dredged Material component. Specifically, this project will assist in the development and implementation of the following goals of the CCMP and Action Plan:

Common impacts to fishes can be classified as biological/physiological or behavioral. Among the biological/physiological impacts are: abrasion of gill membranes resulting in a reduction in the ability to absorb oxygen, decrease in dissolved oxygen concentrations in the surrounding waters and effects on growth rate. Behavioral responses by fishes to increased suspended sediment concentrations include impairment of feeding, impaired ability to locate predators and reduced breeding activity. Increased total suspended solids (TSS) can affect migratory movements as well, and can result in mortality at high concentrations.

Use of armoring to avoid large increases in TSS due to movement of vessels within the construction channel benefits water quality of the New York-New Jersey Hudson River Estuary by removing a source of material contributing to TSS.

Based upon our review, we believe this project assists in the implementation of the Management of Habitat and Living Resources component of the CCMP. Specifically this project will assist in the development and implementation of the following goals of the CCMP:

- To restore and maintain an ecosystem which supports an optimum diversity of living resources on a sustained basis.
- To preserve and restore ecologically important habitat and open space.

This project element will also assist in the development and implementation of the Target Ecosystem Characteristics as goal defined by the CRP, which states:

*Strengthen regional coordination and consistency on regulatory issues, watershed planning and dredged material management (e.g., dredging windows, beneficial uses, identification of upland placement sites, sedimentation control, etc.)*

#### **Underwater Noise Attenuation Systems**

Effects on fish associated with noise from pile driving can include damage to body tissue that may potentially result in death, and sub-lethal effects that could result in temporary decreases in fitness, or to temporary or long-term changes in behavior.

Bubble curtains were determined to be one of the most innovative and effective Noise Attenuation Systems explored in the Environmental Impact Statement and measured in a pile installation and demonstration program. A bubble curtain is a device that releases bubbles of air into water in a deliberate arrangement. The bubbles create a barrier in the water column, reducing pressure wave propagation and isolating contaminants. When the bubbles rise, they act as a curtain, breaking the propagation of waves or the spreading of particles and other contaminants.

Based upon our review, we believe this project assists in the implementation of the Management of Habitat and Living Resources component of the CCMP. Specifically this project will assist in the development and implementation of the following goals and objectives of the CCMP:

- To restore and maintain an ecosystem which supports an optimum diversity of living resources on a sustained basis.

- To preserve and restore ecologically important habitat and open space.
- Minimize human disturbance of natural habitats.

### **Falcon Nest Box Relocation**

Peregrine falcons, a New York State endangered species, have been nesting on the Tappan Zee Bridge in artificial nest boxes since 1988. To avoid the loss of this breeding pair from the local population and as a condition of the NYSDEC permit authorizing the project, the nest boxes on the existing bridge will be moved to the replacement bridge upon its completion for peregrine falcons to utilize in future breeding seasons.

Based upon our review, we believe this project assists in the implementation of the Management of Habitat and Living Resources component of the CCMP. Specifically Falcon Nest Box Relocation will assist in the development and implementation of the following goals and objectives of the CCMP and the Action Plan:

- Restore and maintain an ecosystem which supports an optimum diversity of living resources on a sustained basis.
- Preserve and restore ecologically important habitat and open space.
- Minimize human disturbance of natural habitats.
- Action Plan Goal 2: Habitat and Ecological Health- Preserve manage, and enhance the Estuary's vital habitat, ecological function, and biodiversity so that the Harbor is a system of diverse natural communities.

### **Removal of Existing Structures**

Underwater structures such as bridge piers can have morphological effects by altering local hydrodynamic conditions. While the exact effects depend on pier configuration, piers typically both increase and decrease localized water velocities, resulting in scour or accretion of bed material at different locations. Once initial deposition occurs, the sediment may be subsequently resuspended as part of the natural sediment transport processes within the Hudson River Estuary.

The causeway and piers of the existing Tappan Zee Bridge cause river currents to locally scour the bottom sediments, resulting in depressions in the bottom of the river alongside the bridge. A large area near the existing bridge is subject to scour due to the small column spacing. The western causeway is dominated by contraction scour (i.e., bottom erosion due to increased water velocity and shear stress resulting from the narrow spacing between piers) with a moderate amount of local scour (i.e., bottom erosion around bridge piers and abutments due to the acceleration of water flow around these structures and vortices that occur when this flow is obstructed) occurring at the tips of the piers.

The demolition of the existing Tappan Zee Bridge will result in the removal of piers from the riverbed and will result in an overall decrease in sediment scour and deposition and will benefit habitat in the Hudson River.

Based upon our review, we believe this project assists in the implementation of the Management of Habitat and Living Resources component of the CCMP. Specifically, removal of the existing Tappan Zee Bridge will assist in the development and implementation of the following related goals of the CCMP and the Action Plan:

- Restore and maintain an ecosystem which supports an optimum diversity of living resources on a sustained basis.
- Preserve and restore ecologically important habitat and open space.
- Minimize erosion; decrease soil and water loadings of sediment and pollutants to the Harbor/Bight.
- Action Plan Goal 2: Habitat and Ecological Health- Preserve, manage, and enhance the Estuary's vital habitat, ecological function, and biodiversity so that the Harbor is a system of diverse natural communities.

In addition, removing the existing structure will benefit the estuary by removing a source of lead-based paint. Lead has historically been used in paint to enhance color, improve opacity, and increase longevity. Lead-based paint becomes a concern when it chips, turns into dust, or enters the sediment. The sediment in the vicinity of the Tappan Zee Bridge shows elevated concentrations of lead that greatly exceeded the Class C threshold defined by NYSDEC's Technical and Operational Guidance Series. Demolition and removal of the existing structure will remove a potential source of contamination from the Hudson River.

Based upon our review, we believe this project assists in the implementation of the Management of Toxic Contamination component of the CCMP. Specifically, removal of the existing Tappan Zee Bridge will assist in the development and implementation of the following related goals of the CCMP and Action Plan:

- Restore and maintain a healthy and productive Harbor/Bight ecosystem, with no adverse ecological effects due to toxic contamination.
- Action Plan Goal 1B: Eliminate toxicity or bioaccumulation impacts on living resources by reducing contaminated sites, and manage risk to humans from seafood consumption.
- Action Plan Goal 4: Support an Economically and Ecologically Viable Estuary and Port- The Port of New York and New Jersey will be an integral and complementary part of the world-class New York-New Jersey Harbor Estuary that is environmentally sustainable, economically sufficient, and safe for commercial and recreational navigation.
- Action Plan Goal 4A: Sediment Quality- Reduce sediment hot spots and point and non-point sources of contaminants entering

the Harbor, such that levels of toxics in newly deposited sediments do not inhibit a healthy thriving ecosystem and can be dredged and beneficially reused.

- Action Plan Goal 4B: Sediment Quality- Achieve a quantity of sediments entering the Harbor system that supports the ecological health of the Estuary, including protection of shallow water habitats, such as oyster reefs, without excessively impairing navigational activities.
- Action Plan Goal 4C: Navigation- Navigation related projects in the Harbor are designed and implemented in an environmentally beneficial manner.

In addition, removing the existing structure will benefit the estuary by removing a source of floatable debris. Floatable debris is buoyant waterborne waste material. Drift materials pose hazards to shipping and recreational boating. USACE conducts the New York Harbor Collection and Removal of Drift Project to “remove abandoned piers, wharves, derelict vessels and debris, and also for repairing in-use deteriorated shore structures throughout the Port of New York. The purpose is to reduce hazards and damages to navigation by removing potential sources of drift.

This project is upstream of the Port of New York and will dismantle and remove deteriorating structures containing significant quantities of floatable materials before they fall apart and become drift. Approximately 18,000 timber piles and floatable materials within the fender systems and maintenance docks will be removed. The demolition of the existing Tappan Zee Bridge will be accomplished piece by piece with the use of cranes, barges, and other waterborne construction vessels. All piers will be cut below the mudline. No blasting will be employed, and demolition will be conducted in a manner such that no debris would enter the waterway. Therefore we believe this project assists in the implementation of the Management of Floatable Debris component of the CCMP. Specifically, removal of the existing Tappan Zee Bridge will assist in the development and implementation of the following related goals of the CCMP and Action Plan:

- Prevent adverse impacts on coastal species resulting from floatables.
- Prevent adverse impacts on commercial and recreational boating resulting from floatables.
- Action Plan Goal 1: Clean up Pollution in the Estuary: All of the Harbor waters will meet the Fishable/Swimmable goal of the Clean Water Act, where attainable.
- Action Plan Goal 1D: All of the Harbor will be essentially free from floatable debris.

#### **Stormwater Management Measures**

The water quality volume or “first flush” stormwater runoff from the bridge landings in Rockland and Westchester Counties will be collected and conveyed to proposed water quality treatment facilities located in these two areas. Stormwater runoff discharges would be ultimately discharged into the Hudson River, a tidal water body. Post-construction stormwater quality treatment practices are required for runoff discharging to the Hudson River from the bridge landing portions of Interstate 87/287

in both Rockland and Westchester Counties. The water quality volume or "first flush" stormwater runoff from the bridge landings in Rockland and Westchester Counties will be collected and conveyed to proposed water quality treatment facilities located in these two areas. Stormwater runoff from the two bridge landings is currently collected and conveyed to the Hudson River without treatment.

We believe this project assists in the implementation of the Rainfall Induced Discharges component of the CCMP. Specifically, this project element will assist in the development and implementation of the following goals of the CCMP:

- To minimize the loads of pollutants entering the Harbor/Bight from combined sewer overflows, storm water discharges, and non-point source runoff.
- To eliminate the adverse environmental effects of combined sewer overflows, storm water discharges, and non-point source runoff on the Harbor/Bight.

#### **Atlantic Sturgeon Outreach Program**

One of the threats to the recovery of Atlantic sturgeon populations is by-catch mortality where sturgeon are caught in gill nets and trawls intended to harvest other commercial fishery species. The Atlantic Sturgeon Outreach Program will develop and implement an outreach program directed at the commercial fishing industry with the goal of educating and informing commercial and recreational fisherman of by-catch risks and ultimately reducing commercial by-catch of Atlantic sturgeon in coastal fisheries.

We believe this project assists in the implementation of the Public Involvement and Education component of the CCMP. Specifically, this project will assist in the development and implementation of the following goals of the CCMP:

- To provide for public input to program and policy decision-making on behalf of the diverse stakeholders in the Hudson/Raritan Estuary and the New York Bight.
  - Build community awareness, appreciation, and understanding of the ecosystem and its importance; and encourage action at the community level.
  - Increase communication and foster cooperation among stakeholders and others involved with ecosystem management, protection, and stewardship activities.
  - Enhance educational opportunities for all educational levels.
- To maximize public involvement in the implementation of the CCMP.

#### **Shared Use Path**

The Project includes a shared-use (bicycle and pedestrian) path (SUP) across its northern structure, allowing connection between the Esposito Trail in Rockland County and Route 9 in Westchester County. Currently, the nearest Hudson River crossings for cyclists and pedestrians are the George Washington Bridge, 15 miles to the south, and the Bear Mountain Bridge, 18 miles to the north.

The SUP will provide a scenic trans-Hudson bicycle and pedestrian connection from Rockland County to Westchester County. With transitions linking South Broadway and Piermont Avenue via Cornelison Avenue in South Nyack and South Broadway/Route 9 in Tarrytown, the 12-foot wide SUP will accommodate bicyclists, runners, inline skaters and pedestrians. Strategically located belvederes along the SUP will offer pedestrians a place to rest and observe the Hudson River estuary while learning about the region's rich history and natural resources through informative signage.

We believe this project will assist in the implementation of the Public Involvement and Education component of the CCMP. Specifically, this project element will assist in the development and implementation of the following goals of the CCMP or the CRP:

- To provide for public input to program and policy decision-making on behalf of the diverse stakeholders in the Hudson/Raritan Estuary and the New York Bight.
- To maximize public involvement in the implementation of the CCMP.
- Section 3.5.1 of the CRP, which seeks to provide public access to the estuary with accessible routes to natural areas, enabling them to enjoy local scenic, natural, cultural, historic, and recreational resources.

### Conclusion

In conclusion, we believe strong relationships exists between each of the projects described above and the provisions of the CCMP such that each project should be viewed as assisting in the development and implementation of the CCMP, the current Action Plan or the Comprehensive Restoration Plan and that such projects are therefore eligible for financial assistance from the CWSRF. We note in this connection, the SRF operating flexibility intended to be afforded to the States and the increasing emphasis on creative use of the CWSRF to meet its objectives. We request EPA's views on the analysis outlined herein and the adequacy of such relationship for purposes of determining whether CWSRF financial assistance can be provided to the projects described herein under Section 1383(c)(3) of the Clean Water Act.

We very much appreciate your willingness to consider our proposal. We're available to discuss questions or concerns with follow-up calls or in person. We would like an indication of your views before June 15. Thank you for your assistance as we consider these projects.

Sincerely,



James R. Levine  
Senior Vice President and  
General Counsel